

# AVX Ceramic Transient Voltage Suppressors

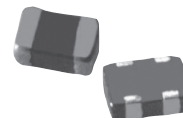
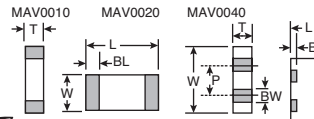
Products may be RoHS compliant. Check mouser.com for RoHS status.

## AVX MAV SERIES MINIATURE AC VARISTORS

**Features:**

- 110 Pk-Pk @ 125kHz capability
- AEC Q200 qualified
- ESD rated to 25kV (HBM ESD Level 6)
- EM/RFI attenuation in off state

	Dimensions: mm (in.)					
	L	W	T	BW	BL	P
MAV0010	1.60 ± 0.15	0.80 ± 0.15	0.90 Max	N/A	0.35 ± 0.15	N/A
MAV0020	1.00 ± 0.15	1.37 ± 0.15	0.66 Max	0.36 ± 0.10	0.20 ± 0.10	0.64 REF
MAV0040	1.00±0.10	0.50±0.10	0.60 Max	N/A	0.25±0.15	N/A



PRODUCT **NEW**

RoHS Compliant

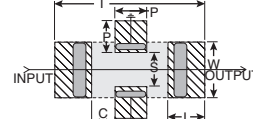
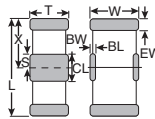
For quantities greater than listed, call for quote.

MOUSER STOCK NO.	AVX Part Number	Case Size	Working Voltage (DC)	Working Voltage (AC)	Breakdown Voltage (V@1mA <sub>DC</sub> )	Clamping Voltage (V@1V <sub>IC</sub> )	Max Leakage Current Rating (μA)	Transient Energy (J)	Cap (pF) max	Number of Elements	Price Each				Reel Qty.	Price Per Piece
											1	25	100	500		
581-MAV0040WP	MAV0040WP	0402	70	52	120 ±15%	225	10	0.02	6	1	.46	.28	.21	.17	1000	.087
581-MAV0020	MAV0020DP	0405	70	52	120±15%	225	10	0.02	8	2	.46	.28	.21	.179	1000	.14
581-MAV0010	MAV0010DP	0603	70	52	120±15%	225	10	0.015	22	1	.28	.21	.157	.134	1000	.08

## AVX TRANSFEED™ MULTILAYER CERAMIC TRANSIENT VOLTAGE SUPPRESSORS



PRODUCT **NEW**

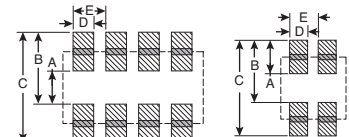


DIMENSIONS: mm (in.)										Recommended Solder Pad Layout					
Size	L	W	T	BW	BL	EW	X	S	T	P	S	W	L	C	
0805	2.01 ± 0.20 (0.079 ± 0.008)	1.25 ± 0.20 (0.049 ± 0.008)	1.143 Max. (0.045 Max.)	0.46 ± 0.10 (0.018 ± 0.004)	0.18 ± 0.25 -0.08 (0.007 ± 0.010 -0.003)	0.25 ± 0.13 (0.010 ± 0.005)	1.02 ± 0.10 (0.040 ± 0.004)	0.23 ± 0.05 (0.009 ± 0.002)	3.45 (0.136)	0.51 (0.020)	0.76 (0.030)	1.27 (0.050)	1.02 (0.040)	0.46 (0.018)	

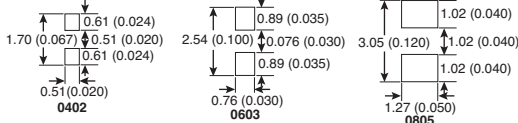
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MOUSER STOCK NO.	AVX Part Number	Working Voltage (DC)	Working Voltage (AC)	Breakdown Voltage (V@1mA <sub>DC</sub> )	Clamping Voltage (V@1V <sub>IC</sub> )	Max. Leakage Current (μA)	Transient Energy Rating (J)	Peak Current Rating (A)	Typical Cap (pF)	DC Resistance	Max. Feedthru Current	Price Each				Reel Qty.	Price Per Piece
												1	50	100	500		
581-V2F105A150Y2EDP	V2F105A150Y2EDP	5.6	4	8.5+20%	18	35	0.1	30	800	0.20	0.75	.44	.40	.33	.316	1000	.304
581-V2F105C150Y1FDP	V2F105C150Y1FDP	5.6	4	8.5+20%	18	35	0.3	120	25000	0.15	1	.68	.57	.50	.48	1000	.46
581-V2F109A200Y2EDP	V2F109A200Y2EDP	9	6.4	12.7+15%	22	25	0.1	30	575	0.20	0.75	.44	.40	.33	.316	1000	.304
581-V2F109C200Y1FDP	V2F109C200Y1FDP	9	6.4	12.7+15%	22	25	0.3	120	1800	0.15	1	.68	.57	.50	.48	1000	.46
581-V2F114A300Y2EDP	V2F114A300Y2EDP	14	10	18.5+12%	32	15	0.1	30	300	0.20	0.75	.44	.40	.33	.316	1000	.304
581-V2F114C300Y1FDP	V2F114C300Y1FDP	14	10	18.5+12%	32	15	0.3	120	900	0.15	1	.68	.57	.50	.48	1000	.46
581-V2F118A400Y2EDP	V2F118A400Y2EDP	18	13	25.5+10%	42	10	0.1	3	200	0.20	0.75	.44	.40	.33	.316	1000	.304
581-V2F118C400Y1FDP	V2F118C400Y1FDP	18	13	25.5+10%	42	10	0.3	120	500	0.15	1	.68	.57	.50	.48	1000	.46
581-V2F118X500Y3DDP	V2F118X500Y3DDP	18	13	25.5+10%	50	10	0.05	20	75	0.25	0.5	.44	.40	.33	.316	1000	.304
581-V3F418A400Y3GDP	V3F418A400Y3GDP	18.0	13.0	25.5±10%	42	10	0.10	20	150	0.200	0.30	1.46	1.24	1.01	.90	1000	.81
581-V3F418X500Y3GDP	V3F418X500Y3GDP	18.0	13.0	25.5±10%	50	10	0.05	15	65	0.25	0.20	.88	.789	.652	.625	1000	.60

## AVX MULTIGUARD™ MULTILAYER CERAMIC TRANSIENT VOLTAGE SUPPRESSION ARRAYS



**SOLDER PAD DIMENSIONS**



**4-Element Arrays**

Dimensions: mm (in.)

	A	B	C	D	E
0612	0.89 (0.035)	1.65 (0.065)	2.54 (0.100)	0.46 (0.018)	0.76 (0.030)

**2-Element Arrays**

	A	B	C	D	E
0405	0.46 (0.018)	0.74 (0.100)	1.20 (0.047)	0.38 (0.015)	0.64 (0.025)
0508	0.89 (0.035)	1.27 (0.050)	2.16 (0.085)	0.46 (0.018)	0.76 (0.030)

**Physical Dimensions**

	0402 Discrete	0603 Discrete	0805 Discrete	0405 Array	0508 Array	0612 Array
Length	1.00±0.10 (0.040±0.004)	1.60±0.15 (0.063±0.006)	2.01±0.20 (0.079±0.008)	1.00±0.15 (0.039±0.006)	1.25±0.20 (0.049±0.008)	1.60±0.20 (0.063±0.008)
Width	0.50±0.10 (0.020±0.004)	0.80±0.15 (0.032±0.006)	1.25±0.20 (0.049±0.008)	1.37±0.15 (0.054±0.006)	2.01±0.20 (0.079±0.008)	3.20±0.20 (0.126±0.008)
Thickness	0.60 Max. (0.024 Max.)	0.90 Max. (0.035 Max.)	1.02 Max. (0.040 Max.)	0.66 Max. (0.026 Max.)	1.02 Max. (0.040 Max.)	1.22 Max. (0.048 Max.)
Term Band Width	0.25±0.15 (0.010±0.006)	0.35±0.15 (0.014±0.006)	0.71 Max. (0.028 Max.)	0.36±0.10 (0.014±0.004)	0.41±0.10 (0.016±0.004)	0.41±0.10 (0.016±0.004)

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	AVX Part Number	Chip Size	Working Voltage (DC)	Working Voltage (AC)	Breakdown Voltage (V@1mA <sub>DC</sub> )	Clamping Voltage (V@1V <sub>IC</sub> )	Max. Leakage Current (μA)	Transient Energy Rating (J, 10x1000μS)	Peak Current Rating (A)	Typical Cap (pF)	Number of Elements	Price Each				Reel Qty.	Price Per Piece
												1	50	100	500		
581-MG042S05X150DP	MG042S05X150DP	0405	5.6	4	8.5	18	35	0.05	15	300	2	.72	.63	.51	.46	1000	0.41
581-MG052S05A150DP	MG052S05A150DP	0508	5.6	4	8.5+20%	18	35	0.1	30	825	2	1.64	1.52	1.27	1.14	1000	1.01
581-MG064S05A150DP	MG064S05A150DP	0612	5.6	4	8.5+20%	18	35	0.1	30	825	4	1.38	1.20	1.17	.96	1000	.87
581-MG052S09A200DP	MG052S09A200DP	0508	9	6.4	12.7+15%	22	25	0.1	30	550	2	1.85	1.55	1.25	1.15	1000	1.00
581-MG064L18X500DP	MG064L18X500DP	0612	9	6.4	12.7+15%	22	25	0.1	30	550	4	1.60	1.45	1.11	.91	1000	.83
581-MG052S14A300DP	MG052S14A300DP	0508	14	10	19.5+12%	32	15	0.1	30	425	2	1.85	1.55	1.25	1.15	1000	1.00
581-MG064S09A200DP	MG064S09A200DP	0612	14	10	19.5+12%	32	15	0.1	30	425	4	1.38	1.20	1.17	.96	1000	.65
581-MG042L18V500DP	MG042L18V500DP	0405	18	14	N/A	50	10	0.2	15	40	2	.66	.61	.51	.45	1000	.40
581-MG052S18A400DP	MG052S18A400DP	0508	18	14	25.5+10%	42	10	0.1	30	225	2	.87	.75	.66	.60	1000	.55
581-MG052L18X500DP	MG052L18X500DP	0508	18	14	N/A	50	10	0.1	20	50	2	.98	.91	.76	.68	1000	.61
581-MG064S14A300DP	MG064S14A300DP	0612	18	14	25.5+10%	42	10	0.05	15	120	4	1.38	1.20	1.17	.96	1000	.65
581-MG064S18A400DP	MG064S18A400DP	0612	18	14	N/A	50	10	0.1	20	75	4	1.38	1.20	1.17	.96	1000	.65

## AVX ULTRAGUARD SERIES

ESD Protection for Low Leakage Requirements

For quantities greater than listed, call for quote.

MOUSER STOCK NO.	AVX Part Number	Chip Size	Working Voltage (DC)	Working Voltage (AC)	Typical Cap (pF)	Freq	Number of Elements	Price Each				Reel Qty.	Price Per Piece
								1	50	100	500		
581-VCUG040030L1WP	VCUG040030L1WP	0402	3	2.3	175	M	1	.39	.35	.27	.22	10000	.149
581-MGUG060030L4DP	MGUG060030L4DP	0603	3	2.3	425	M	4	1.74	1.61	1.34	1.20	1000	1.07
581-MGUG040050L2DP	MGUG040050L2DP	0402	5	3.5	40	M	2	.66	.61	.51	.45	1000	.41
581-MGUG050050L2DP	MGUG050050L2DP	0508	5	3.5	425	M	2	.74	.70	.68	.51	1000	.45
581-VCUG060050L1DP	VCUG060050L1DP	0603	5	3.5	550	K	1	.32	.29	.22	.18	1000	.122
581-VCUG080050L1DP	VCUG080050L1DP	0805	5	3.5	750	K	1	.31	.27	.218	.178	1000	.142
581-VCUG060100L1DP	VCUG060100L1DP	0603	10	7.1	250	K	1	.32	.29	.22	.18	1000	.122
581-MGUG060100L4DP	MGUG060100L4DP	0612	10	7.1	225	M	4	2.11	1.44	1.24	1.16	1000	1.05
581-VCUG040150L1WP	VCUG040150L1WP	0402	15	11	40	M	1	.33	.27	.232	.19	10000	.128
581-MGUG040150L2DP	MGUG040150L2DP	0405	15	11	50	M	2	.72	.48	.42	.39	1000	.36
581-MGUG060150L4DP	MGUG060150L4DP	0603	15	11	75	M	4	1.63	1.53	1.49	1.12	1000	1.00
581-VCUG080150L1DP	VCUG080150L1DP	0805	15	11	120	K	1	.32	.29	.22	.18	1000	.122